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A Description of and Program for Blind Children with Mental or Emotional Disability

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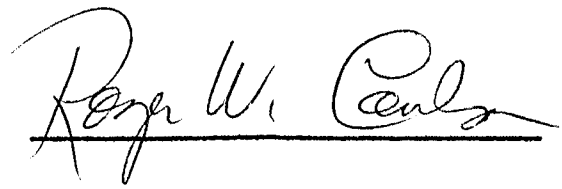

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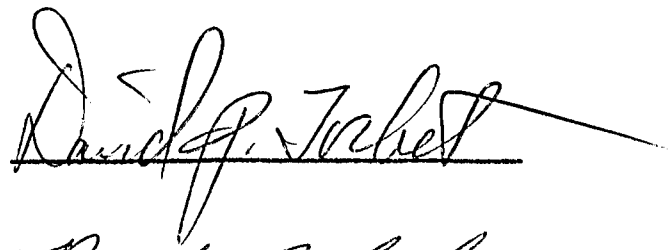

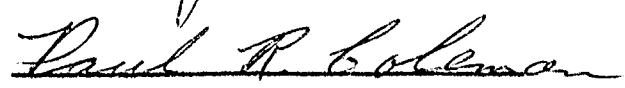

A DESCRIPTION OF AND PROGRAM FOR BLIND CHILDREN WITH MENTAL OR EMOTIONAL DISABILITY

A Thesis

Presented to

the Faculty of the School of Education

Butler University

In Partial Fulfillment

of the Requirements for the Degree

Specialist in Education

by

Sarah Ashman

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TABLE OF CONTENTS

CHAPTER I

INTRODUCTION

Indiana's population of mentally handicapped blind children is not completely known to any agency in the state. In fact, the population of all blind children is not known and it is believed that there must be large numbers not being served by any school or agency in Indiana. Referrals are made to Indiana School for the Blind from a number of sources, such as Indiana University Medical Center, Indiana Agency for the Blind, and the state and county Departments of Public Welfare. The school's head nurse makes a home visit as soon as a child becomes known to the school, sometimes when he is only a few months old, in order to help the parents to understand the child's needs. Periodic visits are made thereafter. Once each year in the spring the school conducts a two-day conference for parents of blind pre-school children, at which time meetings are held with educators and members of the medical profession and related disciplines. Literature is available from the school to help guide parents. In these ways the school maintains a warm relationship with the families of blind children from the time they become known to the school.

A great many of the children with whom the school has contact have a mental handicap in addition to their blindness. Some have had neurological examination and are known to be organically damaged. In a great many cases the parents have gradually become aware that the blind child is not developing as do the other children they know, but they do not know why. Many parents and, indeed, some physicians feel that the delayed development is caused by the blindness and that the child must necessarily be slow because he is blind. Many of the children

have strange habits of using their bodies, known as "blindisms," which the parents react to either by accepting them as an unpleasant, embarrassing aspect of blindness or by trying to correct them. Symptoms are present that indicate that there is something more than blindness handicapping this child, but often little is actually known about the child's mental and emotional condition until the first contacts have been made with the school.

Indiana School for the Blind has a regular academic program fulfilling the state's requirements, but adjusted to blindness. Only educable children are admissable and when a child is judged to be unable to benefit from the program, he must be rejected for admission or readmission to the school. Many children retained in the school are making minimal gains due to unmet needs for psychotherapy or for a special program designed for retarded or neurologically damaged children.

The present study involves three known groups of mentally handicapped blind children, (1) those who have been rejected for even a trial admission at Indiana School for the Blind because they are judged unable to benefit by an academic program, and (2) those granted a trial admission but rejected for readmission as unable to benefit by the program, and (3) those enrolled in the school but not being served adequately by the present program. The numbers of children in these groups will be presented and their characteristics will be described, in order to understand the types of specific programs needed for the education, training, or care of these children and of the assumed population of multi-handicapped blind children of which they are a part.

CHAPTER II

SURVEY OF RELATED LITERATURE

Professional and public interest in the mentally handicapped blind child has been meager until recent years, when the wave of retrolental fibroplasia in the 1940's and 1950's and of the rubella syndrome since 1963 have forced attention to large numbers of these children whose atypical needs for training must be met. The low incidence of multiply handicapped children in the population makes their education a problem. Those with orthopedic or other purely physical abnormalities can usually be accommodated in the schools for the blind and the public day schools for the visually impaired. The deaf-blind have recently had programs developed especially for them at Perkins School for the Blind in Watertown, Massachusetts and in six other schools for the blind in this country. Great expansion in these will soon be necessary.[1] The visually impaired child who has a mental or emotional handicap, on the other hand, is either served inadequately in an existing program or is at home with his parents.

When a child is admitted to a school or other facility, it is assumed there is a program for him. Many private schools limit admission to children with a single, specified handicap which they exist to handle. Public facilities, although set up in the same manner, have generally accepted a few children who can benefit to some extent from their program, recognizing the fact that these children will not be adequately served. However, there are large numbers of children who are unable to take part

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1. Superscript numbers refer to footnotes, which have been gathered to form a single series at the end of the chapter.

in the available programs and whose parents have only recently begun to demand that some agency provide for their children.[2]

Until the last ten years, little has been written specifically about this problem. Mention of these deviant children had been brief and incidental in the literature of different fields prior to 1956, according to survey by Boly and DeLeo at that time.[3] There had been two articles from the area of mental deficiency. More than half the articles on mentally impaired children listed by Lende in 1953 in the literature on visual impairment had publication dates prior to 1935, most of them very early in the century, such as that of Allen in 1906.[4] In the Bibliography of World Literature on Mental Retardation published by Heber and others in 1963, only thirty out of 16,000 references relate directly to this area.[5] Hence, it is necessary that any student of this problem delve into the literature of the various single handicaps involved.

History

An excellent history of the blind by Frampton and others contrasts the pictures of the poor and ignorant blind with those who were educated and respected as mentioned in history from 3000 B.C. to the present. The authors point out that at all times both care and abuse have been given, with gradually increasing educational opportunities provided during the last three centuries.[6] The chief achievement in the present century lies in the increasing awareness of the needs of parents of pre-school blind children for help and guidance to promote emotional health in their children, with special attention given to development of readiness for school.[7] The need for such help and guidance is

indicated by the ever-increasing number of children who are being found at school age too disturbed emotionally to learn in a normal school setting. In many of these children it is very difficult to determine how much of the problem is actual mental retardation or neurological dysfunction and how much is inability to function at a normal level due to disturbance.

Incidence

There has been no census of blind children with mental handicaps, but their numbers are seen to be increasing markedly. A survey in 1909 indicated that retarded children were more likely to have additional handicaps than children of average or above average intelligence, and studies in 1920 and 1928 found a negative correlation between defects and intelligence.[8] Scholl, in 1953, found a greater incidence of below average intelligence in the blind.[9] Michael, in 1956, reported that 10-14% of blind children between 5 and 17 years of age were retarded.[10] In a survey of Westchester County, New York, in 1958, Cruickshank found 16 out of 1000 school age blind children with multiple handicaps, primarily mentally impaired.[11] Myerson and others have documented many studies of retrolental fibroplasia, pointing out the high incidence of retardation, neurological disorder and emotional disturbance in this group, complicated by poor early opportunities for learning in many cases.[12] The National Institute of Neurological Diseases and Blindness says one in sixteen births show some kind of neurological deviation and some of these children are blind.[13] Kirk found in 1965 that most of the blind children enrolled in the Detroit Public School program from 1948 to 1963 had I.Q.'s below 82.[14] In

Bucknam's survey of a residential school population, 96 out of 137 were diagnosed as having psychiatric disorders, retardation, epilepsy or brain damage without motor involvement.[15] Paraskeva found about 15% of blind children in 29 residential schools were retarded, and that most such schools accept moderately retarded children, the day school programs serving mostly blind children of average ability.[16] In 1963 Parmalee found about 25% of the blind in California were in state hospitals for the mentally retarded.[17] Many at school age were either emotionally disturbed or too intellectually unprepared for admission to schools for the blind; many never became "adequately involved". A survey of ophthalmologists in 1964 resulted in a report of incidence of 24.52% of multi-handicapping among totally blind children, and these doctors predicted an increase.[18] Cicenia and others state, "Present day estimates indicate that there are between 10,000 and 20,000 blind multiple handicapped children in the United States."[19] Many of these have mental handicaps. The University of Chicago conducted a study of social and psychological development of blind pre-school children, and a 12-year follow-up study under Northwestern University was completed in 1966.[20] Cohen reports intellectual functioning in the range of 45 to 160 on the Hayes-Binet test, with nine of the children untestable; 85% of these children had retrolental fibroplasia.[21] Of the 48 remaining in the study, 12 were functioning in the defective level mentally, and most of these were children who had had very low birth weights.[22] Cruickshank, Ashcroft and others report incidence studies as well.[23]

Information on the incidence of mental handicaps along with blindness should be forthcoming in the near future, since a number of

surveys on a larger scale are presently under way or proposed. Indiana has a state committee of physicians and administrators presently studying the need for a state survey and census of multi-handicapped children, with the expectation that adequate provision for training or care of these children must inevitably be provided. The American Foundation for the Blind is compiling information on multiple-handicapped blind children known to schools and agencies throughout the United States.[24] As pointed out by Harley, however, in his review of the literature on multi-handicapped children during the last three years, there has been little research except for small surveys and a few reports of new programs. The U. S. Office of Education, Division of Handicapped Children and Youth is supporting a number of studies at this time.[25] Nearly all studies involve primarily children who are receiving some type of service.

The Children

The children under discussion are very difficult to categorize. They are, quite simply, the children who "don't fit" into any type of program for the education of the blind because they require too much care and too much room. School staffs are inadequate and cannot be readily augmented because there simply are not trained personnel available. They require a radical change of curricula and of goals. They are the rejected children.

In attempting to meet the needs of such children, it seems necessary to classify according to the nature of the handicap in addition to blindness. In reality, each child seems to have a unique combination of such conditions; separation is impossible, because they affect each other. For study purposes, however, the conditions will be considered as they are presented in the literature on mental

retardation, emotional disturbance, and cerebral dysfunction in blind children.

The Retarded Blind Child. The term, retardation, is variously defined. A blind child who is below average in intelligence by standard tests is usually unable to progress at the expected rate in school, so special provision must be made for him and goals revised. Any child who is educable is acceptable in most residential schools, providing the retardation is the only additional handicap. The child who is not educable is usually denied admission or dismissed after a trial period. The severely retarded or trainable blind child is nearly always in an institution for the mentally subnormal or at home.[26]

A survey of state schools for the retarded ending in 1956, with a 50% return on the questionnaire used, found that 90% of those replying had blind retardates, with I.Q.'s ranging from 12 to 80, mostly over 40. Only eight schools had programs for retarded blind, all emphasizing daily living skills. The curricula are listed in the paper.[27] Such children require social teaching to make them acceptable to their families and in their communities. They require a specially adapted curriculum; a diluted regular school program is not satisfactory.

The retarded blind are characterized as meek, routine in their activities, and capable of training for menial chores.[28] They do not tend to develop the remaining sense modalities as do normal blind children, so must be taught to make sensory discriminations.[29] These two disabilities tend to increase each other's effect.[30] These youngsters are not self-conscious about their appearance, bad manners and poor habits of cleanliness, so they may retain blindisms[31] unless patiently taught.

They frequently use meaningless speech, and often they compose long, descriptive stories which have no basis in their own experience. Experiences must be provided to combat excessive or irrelevant verbalism, and also to teach interaction with others, orientation, number concept and tactile discrimination: all the learnings which are required incidentally in the experience of the blind child of normal mental ability.

Many writers emphasize the need to give such children experience of success and a sense of security, of being loved. The sad but inevitable fact of parental rejection of a great many trainable children is a salient factor in poor early development. Finding most of the retarded children in her study of retrolental fibroplasia were also apparently disturbed emotionally and noting the similar early history of RLF's and severely disturbed children, Hallenbeck provided psychotherapy and found many children improved. She says,

> "Judging by the demonstrated improvement of disturbed blind children treated psychotherapeutically, ... there is no basis for the belief that severe retardation of development is caused directly by blindness itself or by some organic lesion associated with retrolental fibroplasia." 33

There are a number of other reports of programs of this nature in recent literature, usually indicating behavioral improvement to a point.[34]

Social work with parents to help them handle their own feelings and to reduce their expectations for the child to a level that the child is able to reach contributes greatly to improvement in the child's ability to function acceptably.[35] Ideally, the doctor who originally discovers the child's condition, or the university pediatric outpatient clinic, should recognize the need of the parents for such help and provide guidance.[36]

There are a number of sensitive case studies and reports of work with small groups of youngsters. Burlingham presents as part of a psychoanalytic study project a detailed history of the early development of a retarded blind child in a London nursery; much insight into what may be happening in the development of this child's ideas of self is provided.[37] Wills reports similar observations.[38] Lunt reports on an English study of 24 children between the ages of 4 and 8, all functioning at nursery school level.[39] The library at Perkins School for the Blind at Watertown, Massachusetts, contains a large number of Harvard class papers on children with mental defects.

Most mentally subnormal children are also emotionally disturbed; some have been found capable of nearly normal intellectual functioning if the disturbance is eased.[40] This fact leads Di Michael to question the use of the mental age concept in planning for these children, since it is not known what effect multiple disabilities may have on test scores.[41] Most writers, however, emphasize the need to train each child at the level where he is able to achieve some measure of success at that time.[42] Such thinking is supported by the organizational learning theory of D. O. Hebb, who describes the building up of association areas in the central nervous system, during the slow first learning of infancy and early childhood, to form perceptions and acquire meaning. Increasing environmental control results, but the whole process is much slower in retardates.[43] Frequent reevaluation is necessary because of the wide variability of functioning at different times.[44]

The Emotionally Disturbed Blind Child. The severely disturbed child whether or not blind, is usually very difficult to distinguish

from the retardate. A case history often aids in making the distinction with an older child, since he sometimes has formerly functioned on a much higher mental level and his deterioration has been observed. With the very young child, often the emotional defect has been present since the early months of life, usually unrecognized by parents who are themselves confused and overwhelmed by the birth of a blind baby. In either case, usually this is a child who partially or totally rejects his environment and those within it.[45]

When the disturbance is of very early origin, the child has the characteristics of an autistic or schizophrenic child.[46] Language is deficient and the child sometimes seems not to hear voices although he may be alert to other auditory cues. When there is language, it is often echolalia, involving no intentionally meaningful communication with another person.[47] Often there is inner speech, the child responding but not replying. Sometimes there is a coded language.[48] The child usually has odd mannerisms, called "blindisms", which are also typical of severely disturbed children with normal vision, and a very great deal has been written on this subject because of the fact that blind children of normal development also commonly have these mannerisms when they are young.

Blindisms are usually rhythmic activities, such as rocking, swaying, flicking or fluttering the hands, nodding or shaking the head, and odd posturing. Many hold that blindisms are a form of self-stimulation to make up a sensory deficit imposed by blindness, which can be decreased by teaching the child proper ambulation and meaningful body activity.[49] Shevrin and Tousseing emphasize tactile stimulation during the earliest months of life.[50] Stone feels that blindisms are

used to block out environmental stimuli.[51]

Sensory deprivation is discussed not only in respect to blindisms but as a causal factor of grave consequence in the ego development of a blind child. Bachelis says, "There are critical periods during the development of an organism in which specific sensory stimulation is required, lest there be irreversible damage."[52] He counsels parents to provide a rich and varied environment, yet a warm and a stable one, with maximum communication with the child, physical as well as verbal.

Many writers emphasize the need for opportunities for physical exploration of the environment, including the people in it, as soon as the child is able, in order that the child may develop a sense of self and other, and an understanding of the stability and dependability of objects.[53] Klein states that blindness contributes to an impoverished environment, and to poor feedback to aid in the "evaluating process by means of which the child develops ideas of an anticipatable and predictable reality."[54] Little is known about communication on the affective level, which, without vision, depends on cues from other sense modalities and thus is less direct, more artificial and less dependable.[55] Some children relate more to inanimate objects than to people, or give only selective attention to people, covering up anxiety and hostility by simply not talking.[56]

Blindness leads to more active fantasy life by diminishing the child's capacity for reality testing.[57] A source of rapid information is lacking, particularly in early life, with reference to the family's feelings about the child. Green and Schecter describe this process, "It has been found that the parents of these children, expecially the mothers, experience feelings of extreme guilt and anxiety, with very

limited satisfaction and security."[58] In order to allay guilt, the mother becomes preoccupied with giving to the child, thereby increasing his helplessness and by underevaluating him, undermining his confidence. The child becomes cut off from others, the mother becoming his eyes. Frequently, the mother later on discovers the child is not what she expected and becomes bitter and rejecting.[59] Deprivation of mothering through rejection, multiple mothering and distortions in quality of mothering are also factors which increase the child's tendency to retreat from reality.[60]

This process, the development of disturbance in blind children, is treated in many ways, according to the psychological orientation of the writer, and much insight is gained from each. Counseling for the parents of blind babies, using these insights, is of vital importance in preventing development of emotional disturbance and insuring optimal development of the child.[61]

Severely emotionally disturbed blind children are not helped by being placed in regular school classes for the blind; they make little or no progress either academically or emotionally. The second handicap takes precedence. Often they are able to benefit by other types of services.[62] Both diagnosis and treatment require the team approach, involving the physician, social caseworker, psychologist, educator and often the speech pathologist.[63] Evaluation must be an on-going process. Frequently the services of an out-patient psychiatric clinic provide the first step.[64] The most extensive of several university projects is the Syracuse Center for the Development of Blind Children.[65] Some schools for the blind have splendid projects separate from their

academic programs, and there are a few excellent private schools; unfortunately, each is able to accommodate only a few children. Most of these schools accept retarded, disturbed and even brain-damaged children. This practice appears to be defensible since handicaps seem to come in batches, one child showing signs of several types of problems. As Tretakoff points out, there are many approaches, all reporting some degree of improvement, and possibly "extensive human contact in a stimulating environment is the major ingredient that produces success.[66]

The blind child with neurological dysfunction. Many children with brain damage are being served in schools for the blind or for the retarded, although often not adequately, and some of these make academic progress and develop normally in time.[67] However, there are many children who are not able to function in a manner that makes regular school placement feasible.

There are many causes involved; prematurity, metabolic disorders, birth trauma, viruses, drugs. There is a high incidence of eye abnormalities in the cerebral palsied, mongoloids and other defectives.[68] Facilities are presently preparing to absorb the greatly increased numbers of such children born between 1963 and 1965 who sustained who sustained damage to eyes, ears, heart or brain due to maternal rubella in the first trimester of pregnancy. It has recently been learned that damage is more pervasive as well as more serious earlier in the pregnancy; studies continue in this area.[69]

Sensory deprivation and organic impairment tend cyclically to exaggerate one another. There is impairment of perceptual integration due to blindness, which results from the fact that the child lacks

important feed-back concerning the results of his acts.[70] This frequently results in social isolation and impairment of the child's emotional functioning.[71] In very early life, there is a lack of development of a sense of self and other in many blind children, but the neurologically damaged child has less ability to compensate for lack of vision by use of other sense modalities for confirmation of his perceptions.[72]

Behavior of such children takes two forms. There are some very quiet, lethargic, unresponsive children. The great majority, however, blind or sighted, are characterized by poor motor coordination, hyperactivity, short attention span, lack of communicative speech, perseveration and inability to recognize a whole at once, to distinghish figure from ground.[73] Eisenberg emphasizes the effects of inability to be selective in response to stimuli. Lewis, Strauss and Lehtinen say that such a child "perceives the nature of reality otherwise than the normal person. He reacts to it in another way."[74] He gets lost because he doesn't perceive his environment in the usual way.[75] He has altered ideas of size, position and time, so he is inconsistent and undependable in his judgments.[76] He tends to stay in the safe environs of his home and family because he generates hostilities in others, which in turn increase his own disturbance.[77] His self-image is poor and is often reflected in anxiety or stubborn and negative behavior which is related to his frustration.[78] All of these usual effects of neurological dysfunction are grossly exaggerated when vision is lacking. Blind children are more affected than sighted by the attitudes of other people toward them,[79] hence disturbance is usual.

Parents' emotional problems contribute to the child's disturbance.

The baby is not as expected because he is blind and his behavior is incomprehensible, even on the basis of blindness. The deep guilt of the parents is increased by their inability to feel pride and joy in their baby and, in turn, interferes with ability to love the child.[80] The child internalizes the attitude of his parents. Parent counseling at an early date is vital to the development of the brain-damaged blind child so that the parents may understand the child's problems and be relieved of their own guilty feelings. They need to learn to handle the child consistently and firmly, building in him confidence in them and in the stability of his environment, and insuring him experiences of success.[81] With optimal management, some organically damaged blind children are able to develop normally.

Projects

As a result of growing dissatisfaction on the part of parents and educators with the gross lack of adequate facilities and programs for children with mental handicaps in addition to blindness, a few courageous projects recently have been established and reports of increasing attention to treatment of the requirements of the children is appearing in the literature. Most of new programs are small. Some have been short-term experiments from which much knowledge has been gained. Since the three usually utilized categories of mental handicapping, retardation, neurological dysfunction, and emotional disturbance, are difficult to distinguish and separate, most schools serve any child who seems amenable to the type of teaching or treatment they are able to provide.

All schools for the blind have special classes for children who are unable to function normally in the regular academic program by reason

of additional handicaps. A very few have social work with parents and psychotherapy for children.[82] The program at Perkins School for the Blind is very comprehensive and has been well documented in a large number of papers in the school's library. Children who function at a retarded level are generally educated in the same manner regardless of the reason for the retarded functioning. The increased individual attention benefits all of these children, but methods of educating children who are brain-damaged differ greatly from those used with withdrawn, disturbed children. Personnel are usually not trained to make such a distinction in their teaching. There needs to be interdisciplinary personnel involvement as well as interdisciplinary evaluation of the children involved in any program.[84] There is education available in these areas at many graduate schools but at present very few teachers of the blind have had training in handling brain-damaged or seriously disturbed children. The methods for teaching retarded children are usually used for all, and often successfully.[85]

Nearly all reports of work with deviant blind children have been published since 1960, although programs existed before this time in schools for the blind and for the retarded. Curricula had been suggested.[86] Insights for present planning are gained from the presentation of the various programs.

One of the earliest experiments was a four-week program in 1959 at the Nebraska School for the Blind. The five children included in this study were five and six years of age but were developing slowly for any of the three reasons. It was believed they might possibly be of average intelligence. Parent cooperation was a requisite, and parents had received counseling for three years in the school's pre-

school program. Staff consisted of a counselor, houseparent, nurse and cook. Intensive training was given in locomotion, eating, dressing, and other self-help skills, communication, socialization and constructive play. Many field trips were taken. The methods used were the same ones recommended to the parents for home use during the previous three years. The children were evaluated by use of the Vineland Scale of Social Maturity and found to have made an average of six months' gain in the four weeks, the most retarded making the greatest gains. The staff concluded that the parents had not put forth sufficient effort prior to the beginning of the four-week project. As a result of the program, the staff recommended more counselor contact with families of pre-school children who were not progressing normally, a diagnostic team approach, and a program either in a separate facility or in foster home placement for the children whose parents failed to help.[87]

In 1959 and 1960, the American Foundation for the Blind held workshops on severely disturbed blind children for educators, social workers, neurologists and psychiatrists. The discussions resulted in a recommendation that work be initiated with these children on a simple, inexpensive basis with no highly qualified personnel. One eager and patient teacher, one houseparent, six to eight children and plenty of space and equipment seemed an adequate setup, with the children segregated from others, as they are in any case, wherever they are educated.[88]

In 1960 Charney published a comprehensive overview of the field of mental retardation and special education, including the retarded blind in his consideration of services in various states

and in his delineation of characteristics of these children which determine their needs and placement.[89]

There have been summer programs at Michigan School for the Blind, with cooperation and advice from the University of Michigan, for four years. Results have been successful and some of the children have been able to take part in a modified program during the regular school year.[90]

The Edward R. Johnstone Training and Research Center at Bordentown, New Jersey, a state residential school for the retarded, initiated a pilot program for multi-handicapped blind children in 1961, with cooperation from the New Jersey Commission for the Blind. New Jersey does not have a state residential school for the blind, educating normal blind children in the public day schools. Cicenia and others involved in this project felt that in a residential school methods could be found for educating these children by trial and error, as had been true of normal blind children in the earliest days of special education, when all blind children were deemed totally disabled. The program began with ten children, six to fifteen years of age, expanding a year and a half later to twenty, 6 to 17 years of age. All were excluded children, but there were some children with orthopedic as well as mental handicaps. A psychologist supervised the staff of 8 attendants on 24-hour duty, one instructor, one physical education teacher, personnel from the Johnstone staff for special services and a mobility instructor from the Commission for the Blind. The focus was on the fact that the children had unmet developmental needs rather than different needs. All personnel acted as therapists, teaching curiosity and generating enthusiasm in security-promoting and acceptance-promoting experiences.

The children were helped to communicate, understand and control their emotions.[91] The teacher-pupil relationship was all-important.

Tretakoff at Hope School in Springfield, Illinois, emphasizes the controlled environment approach, which he says is difficult and which is seldom used. The goal is to create an atmosphere of acceptance involving all personnel, houseparents, teachers, cooks, maintenance staff, and, hopefully, also involving parents through counseling. A disturbed child requires a one-to-one relationship with the teacher, who attempts to help the child develop an adequate self-concept, teaching parts of the body first, then relationship to the environment and objects in it through self-help teaching. Many of the 29 children at Hope School have only inner speech, but vocabulary is nonetheless built methodically, and if the child is not aphasic, expressive speech develops as the emotional stability increases. Methods used by Edward Sequin 100 years ago and, in our time, by Maria Montesorri are used to teach space relationships and the use of remaining senses. When the child is ready, he is worked into a social situation and helped to interact with other children and to accept responsibility for household chores. It is hoped that some of these grossly handicapped children may eventually reach about fourth grade level academically and be able to accept employment in a sheltered shop.[92] Many, unfortunately, will require custodial care.

In 1963, St. Joseph's School for the Blind, under Sister M. Rose Imelda, was able to transfer its normal blind pupils to day schools and to initiate a program for children who function on an extremely low mental level. At present there are fifty children enrolled, many of them day pupils with the most advanced working

at a fifth grade level. Many curricula have been used, but emphasis has been on Kephart, Montessori and the controversial Doman-Delacato methods. For two years a small experimental group of children aged 9 to 14 functioning initially at a maximum level of 2-1/2 years has been on the complete Doman-Delacato program, involving patterning, crawling and masking, with a control group on an enriched physical education program. Two of these children are now in a regular sighted school. The general program involves tactile stimulation, language development, training in daily living skills and travel. Language is stimulated by taping conversations, dramatic play, puppet play, telephone use and speech therapy. Each child receives occupational therapy three hours per week from an old gentleman who is a grandfather figure. At the time of writing, eleven children were in individual psychotherapy with part-time psychologists and six boys were in group therapy. The school has a full-time psychiatric social worker engaged in informal counseling and home visiting. A separate teen-age program includes occupational training with sighted retardates with intensive mobility instruction and paid subcontract work. The school has a very well developed volunteer service program, including twelve medical specialists on monthly rotation. Sister Rose Imelda expresses tremendous enthusiasm for the work at St. Joseph's and is greatly encouraged by their success in improving the social and intellectual functioning of seriously impaired children.

The Illinois Braille and Sight Saving School began a program in the Fall, 1965, to meet the needs of increasing numbers of developmentally delayed children. Assuming that experiential and sensory stimulation deprivation during infancy and childhood was the major causal factor,

sensory stimulation including prescribed exercises and activities planned by an activity therapist, training in the skills of daily living and academic training on a 2:1 pupil-teacher ratio were the emphases. The program was adjusted both in length and content to the needs of each individual pupil, who worked at his own level and rate. The academic program was the readiness type. The staff was augmented by a speech correctionist, social worker, psychologist, general physician, ophthalmologist and dentist. There were twenty children, age 4-1/2 to 8-1/2 years at enrollment, who continued as long as they were benefitting.[94]

At the Sunland Training Center in Gainesville, Florida there is a small group of trainable blind children who are receiving training in self-reliance, improving sensory perception and social and neuromuscular skills.[95]

Gracewood (Georgia) State School and Hospital, where many blind children and adults live in a population of retardates, conducted a survey of institutions for the retarded in the United States in 1965-6 learning that nearly all have blind patients, most of whom are over fifteen years of age and almost half of whom have mental ages under two years. Only eleven had separate facilities for the blind. Twenty-two provided job training for menial work.[96]

There are a number of similar descriptions of facilities and their programs.[97] One school has published the floor plan of their unit for blind retardates.[98] Initial experiences have been documented and the curricula and methods growing out of them described.[99] The library at Perkins School for the Blind in Massachusetts contains many papers on studies by Harvard and Boston students which have

contributed to the extensive program of this school. Sulze treats the question of mobility training and the resulting improvement in self-image.[100] Lewis, Strauss and Lehtinen described the educational methods suitable for brain-damaged children, and these are capable of modification to meet the needs of blind children with similar organic problems.[101] Bruner states that the curriculum for retarded and disturbed children consists of establishment of self-reward sequences, one skill formed to make another possible.[102] New York's Jewish Guild for the Blind has a mental health center project on concept formation.[103] Wolff has recently listed studies which are seriously needed in this field: studies of cognitive perceptual development of the effects of supportive environment and what constitutes a supportive environment to a blind child, of the lack of object permanence, of a affective-perceptual interaction and of sensory input compensation such as is believed to take place in blindisms.[104]

Research continues in the area of development in the earliest months of life, with a view to preventing the emotional disturbance contributing to the poor mental functioning of so many blind children.[105] Parent counseling, important at all ages, is vital during the blind child's infancy. Parmalee summarizes the nature of this counseling in the case of the non-brain-damaged baby:

> "The basic efforts are to encourage the mother to give the blind infant as much stimulation by say of touch, sound, and movement as possible; to keep encouraging her to give the child independence of action as the child reaches the toddler stage; and to encourage her to place the child in a nursery school with sighted children when the child is approximately three to four years of age." [106]

He enlarges on this advice in the area of teaching the use of hands to gain information. Field workers need to counsel parents regarding

their own problems as well.

The organically damaged child has needs which are different from those of the non-damaged child . Parent and teacher counseling regarding the management of such children can help prevent the overlay of severe disturbance so common in these children. The carefully structured environment and reduced stimulation must be modified to some degree when blindness is added to neurological dysfunction. Bachelis says that if there is no stimulus variation, feelings of unreality are generated, leading to depersonalization, anxiety, lack of contact with reality, even hallucinations. So with the blind brain-damaged child he advises a stable background (same room, similar music and consistent handling) but varying stimulation in the foreground to find areas of interest, competency and communication in which the child is motivated to perform.[107]

Most writers emphasize individual programming for all deviant blind children, with the realization that each child's success will depend on the extent of his disablement as well as his abilities and the expectations of his parents and teachers. Goals must be set at realistic levels and the child made aware of success at his own level. Level of expectations should be raised as is possible.[108] For the disturbed child, warm physical handling by the teacher or counselor is added to opportunity for physical exploration of the environment.[109] Ashcroft emphasizes that the "teachable moment" endures longer than was formerly supposed, so that remediation is possible in many cases.[110] Much time is needed and the staff must have "high tolerance for delayed gratification."[111] The "therapeutic milieu", changing according to progress, is the preferred method of handling,[112] but in admittedly

very difficult to achieve. Training of personnel is direly needed throughout the country so that old programs may be expanded and new ones initiated to fill a tremendous need.

In considering the problem of serving blind children with mental and emotional handicaps in Indiana, much insight is gained from the thinking of others and their attempts to provide programs for similar children.

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CHAPTER III

PROCEDURES USED IN THE STUDY

Procedures used in obtaining the data required for this study were simple but time-consuming because of the human contact involved. Since the study is two-fold in its emphasis, there is some difference in the amount of material available for use in characterizing the children, data being more complete on those excluded from the school in the past three years than on those who have been enrolled for some time.

All of the children were given certain psychological tests appropriate to their level of development. For children over seven years of age and not suspected of retardation the Verbal Scale of the Wechsler Intelligence Scale for Children or the Wechsler Adult Intelligence Scale was used as the first test because of the clinical information these tests tend to yield in addition to the measure of mental functioning level. The Interim Hayes-Binet Intelligence Test for the Blind was used as a second test for a few of these children, and as the first test for younger children and those whose functioning level was below a mental age of about seven. Children who proved too immature for formal testing or who obtained mental ages scores below three years were rated on the Maxfield-Büchholz Scale of Social Maturity for Use with Pre-School Blind Children, a revision of the Vineland Scale.[1] Stanford Achievement tests were administered whenever the child was able to take such a test.

As means of testing emotional factors of adolescents who seemed, during the administration of the intelligence test or on observation

in the school situation, to have serious emotional problems, the Minnesota Multiphasic Personality Inventory, the Adolescent Emotional Factors Inventory (Bauman)[2] and the Rotter Incomplete Sentences Blank were used. Most clinical information, however, was obtained from the use of the Wechsler Scales.

All children were observed in some form of social setting, and most of them in an educational situation appropriate to their age, as well as in the testing situation. Children presently in school and those who had had trial placements were studied in the classroom and in informal, less structured or even completely unstructured settings such as physical eeucation classes, free play periods in the lower grades, moving about from class to class, in the dormitories, in after-school play and in the planned social and recreational activities. The children who were applying for admission were all observed during dinner at school with their parents, so that the interaction could be noted.

Social and developmental histories were taken on all applicants and as many of the previously enrolled children as possible. Both parents were usually present for these interviews if the family was intact. In many cases a grandparent, guardian, foster parent or social worker contributed information.

For the children attending school, teachers and houseparents supplied anecdotal reports of behavior as well as the usual grade reports on schoolwork and dormitory reports on interpersonal relations and skills of daily living.

The basic child study therefore included (1) a psychological testing report, (2) social and developmental history, (3) psychological

report of observations of the child during each school year, including a log record of significant episodes and contacts, (4) school grade record and (5) dormitory reports.

The child study materials were submitted to the school's consultant child psychiatrist, Dr. Nancy Roeske, director of Riley Child Guidance Clinic at Indiana University Medical Center, who spends one half-day each week at the school. Her evaluation of the child was submitted to the school's evaluations committee and usually was the determining factor in recommendation for admission of a child to the school or retention of a child already enrolled. Frequently the psychiatric evaluation resulted in a request for further medical assessment, made by the family physician or by the various clinics at Indiana University Medical Center. Final decision made by the Commissioner of Health was based on all the medical and psychological reports.

From all the data thus available it was possible to categorize the involved children in terms of their needs for education or training and of the degree of adequacy with which these needs were being met. Some necessary changes in the state's provision for the blind child with a mental handicap became quite obvious but others remain a matter of controversy, as they are in other areas of the country.

NOTES

[1] A. Gesell and C. Amatruda, Developmental Diagnosis (New York: Hoeber, 1960).

K. E. Maxfield and S. Buchholz, A Social Maturity Scale for Blind Pre-School Children (New York: American Foundation for the Blind).

[2] Mary K. Bauman, H. Platt and Susan H. Strauss, "A Measure of Personality for Blind Adolescents," International Journal for the Education of the Blind, 13:7-12, 1963.

CHAPTER IV

ANALYSIS OF DATA

There is growing concern on the part of educators and the medical profession in Indiana for the welfare of the children who have been deemed unable to profit by an academic program and hence have been rejected when they applied for admission or readmission to Indiana School for the Blind. In addition to these, the school maintains supportive contact with the families of 34 children who are functioning on a level so low that their parents have never sought admission for them. All of these children and the children involved in this study are the responsibility of their parents or guardians on a full-time basis, except for a few sporadic short-term attempts at training in local nursery schools.

Children Rejected without Trial Enrollment (See Table I, page 78)

During the period of the study the evaluation committee at the school has found it necessary to recommend rejection of 18 applicants for admission who have not been admitted later on re-evaluation. Two children now attending the school were admitted after re-evaluation approximately a year after rejection because their mental health was deemed sufficiently improved. Many of the 18 who have never had trial enrollments have been evaluated more than once, at about yearly intervals. Many of the parents and children attend the annual conference for parents of pre-school children and the children are observed at this time as well as at the time of their evaluation.

Of the 18 children only one tested in the average range of intellectual functioning, two are within the borderline defective range,

and fifteen below 60 I.Q., several of them untestable. Ages range from 5 years 10 months to 19 years 11 months at the time of testing Age entered into the decision for rejection. In four cases retardation is apparently the only mental handicap, since there is no evidence of significant emotional disturbance and no reason for the retardation is known. In two of these cases, there is a family history of retardation with blindness which has been the subject of study at Indiana University Medical Center. In all of the other 13 cases it is either known or strongly suspected that there is another factor operating.

Six children are known to have had neurological examination and for a seventh recommendation has been made that such an examination should be conducted because strong behavioral signs of organicity were observed. One child age 12 has familial progressive cerebro-macular degeneration in a sufficiently advanced stage so that she can no longer function in any structured social situation and it is becoming very difficult to care for her in her home. This child had four years of public school education and had been out of school one semester when she was first seen at the School for the Blind. At that time she had a W.I.S.C. Verbal I.Q. of 50 with strong evidence of her deterioration in the nature of her responses and the score scatter. On two children, aged 8 and 7, the doctor's report says "possible brain damage, emotional factors" and "possible central nervous system involvement, and exhibits a good deal of autistic symtomatology." These children had Maxfield-Buchholz social maturity quotients of 36 and 48 respectively. Three children had definite diagnoses of cerebral dysfunction. One of these aged 6 had a Hayes-Binet I.Q. of 43 with a Maxfield Buchholz social

quotient of 63. (This difference in the two scores is usual at this level). One child aged nearly 6 had a social quotient of 60 and was not testable. The third, aged 11, had a Hayes-Binet I.Q. of 60 and had had some public school experience in a room for retarded children. The youngster for whom neurological examination was recommended had a questionable Hayes-Binet mental age of two years, two months, which, for her age, was not charted, but which gives an approximate I.Q. of 17; her social quotient was 26. These children are all, therefore, severely retarded as well as brain damaged, and cannot benefit by any type of academic program even at a retarded level.

Besides the two children who are emotionally disturbed as well as brain damaged, and one in the retarded group with no known damage, there are six children whose major handicap is severe emotional difficulty. The oldest of these, past 18 years of age, had a W.A.I.S. I.Q. of 93, but was only in grade 7, and was extremely immature and hostile. A 15 year old had an I.Q. (W.I.S.C.) of 77 and had had promotions to fourth grade in public school but was reported by his school not to be functioning on this level. Dr. Roeske's diagnosis was psychosis. A thirteen year old boy, also psychotic, had a W.I.S.C. I.Q. below 45, off the tables, and was reported to be in second grade at another school for the blind before coming to Indiana. A twelve year old was an agitated psychotic, not testable, with a Maxfield Buchholz score of 22, hence not even trainable in his present emotional condition. He was able to recite several Psalms verbatim, but there was little communicative speech. It seems probable that this child is not amenable to treatment and may also be brain-damaged or basically mentally deficient. A ten year old is markedly retarded, testing at 38 on the Hayes-Binet and

severely disturbed, possibly psychotic. For one child no dependable measurement of functioning level could be made. He was a psychotic seven year old who was a ward of his county and had been so agitated since wardship was taken that neither his social worker nor his foster mother was sure of what he was able to do. From observed behavior it was judged that he was functioning at a defective level, but there was intermittent communicative speech with proper usage of pronouns. For nine children, therefore, emotional disturbance was the major reason for rejection from school and it is not known whether psychotherapy could avail. Without it certainly no school program could benefit these children.

Children Rejected for Readmission (See Table II, page 79.)

During the period of this study, parents of 62 children enrolled in the school have withdrawn their children by request of school authorities and the Commissioner of Health. Since the school population has varied in number from a maximum of 233 during the 1963-4 year to 202 at the close of the study, the number of withdrawn children is 26.6% of the maximum enrollment during this period. One child who was withdrawn for hospitalization for psychiatric treatment has returned to school and is able to progress. Two other children were withdrawn by their parents at a time when the school deemed them disturbed and was working to alleviate the problems facing them. It is unlikely that many of these children can be readmitted at a later date because very few are receiving treatment. Some, of course, are not amenable to treatment.

Categorizing these children is very difficult because mental handicaps are not mutually exclusive categories. Many retarded children

are brain-damaged and even more are disturbed; many brain-damaged children are disturbed. They learn very early that they are not like other children, that they are not able to do the things they want and need to do, that parents and other adults treat them differently and are often disappointed in them, that other children shun them. On the other hand, it is not possible to say a child is disturbed by reason of his retardation, because his functioning level can be lowered, sometimes quite grossly, by emotional problems; these can be of such early origin that the developmental history does not tell the story. One brain-damaged adolescent, making mistakes in testing, cried out, "I'm all mixed up! I'm always all mixed up! Why can't I ever get things straight? I think I know it and then suddenly it's gone!" Few of them see their own problem so clearly or can verbalize it, but many of the younger children are just as distressed.

Those with All Three Problems. There were two children withdrawn because of all three problems. One of these was a very immature fifteen-year old who had been in a special room for five years. He had previously been taken to a psychological clinic and found untestable. At school, with a familiar examiner, he tested at 46 I.Q. on the W.I.S.C. At our request, he had examination at a neurological clinic in a hospital and was found to be brain-damaged, retarded and disturbed. This boy struggled with first grade materials in braille each day and seemed to learn a little; each night wiped out the learning. He had occasional temper tantrums and was becoming large enough to be dangerous when he was withdrawn. He is at home with his parents. The second boy was twelve years old at the time of withdrawal, an appealing boy with a

history of seizures only partially controlled. He had had good medical attention and some psychological examination. At school he had made a W.I.S.C. Verbal I.Q. score of 61 and the same on a Hayes-Binet. Our psychiatrist's diagnosis was borderline psychosis as well as cerebral dysfunction and retardation. This child is in a state hospital because his bursts of temper are dangerous to others in his family and he is large to control physically.

The Emotionally Disturbed Children. Twenty-two children have been withdrawn solely by reason of emotional disturbance severe enough so that their educational progress had been almost nil or so that they were presenting uncontrollable social problems.

Six children were diagnosed as being psychotic and four as being borderline psychotic when dismissed. Of the psychotic children, four were boys and three of these were thirteen years of age. The other boy was 21 years old and had been examined a number of times previously. He had been deemed borderline psychotic eight years earlier and his parents had repeatedly been advised of his need for treatment. He had been hallucinating for several years, shouting out loud denials to his voices. His Verbal I.Q. on the W.A.I.S. was still 87, but the test was filled with bizarre responses. One of the two girls had been tested three times and seen to deteriorate from a 92 W.I.S.C. I.Q. to 81 in two years. Her school functioning deteriorated similarly although she retained her former reading level. This child had attended public school for three years prior to enrollment in the School for the Blind and her behavior was reported as much the same at the time she came. Of the six psychotic children only two have had treatment, although all the parents were urged

to make immediate arrangements for psychotherapy or hospitalization. Of the four borderline psychotic children, one is hospitalized and one has at least been seen by a psychiatrist. One young man, who had an 89 W.A.I.S. Verbal I.Q. and had reached fifth grade level in his academic functioning according to Stanford Achievement Test scores, is now employed in a sheltered workshop although still immature and withdrawn. The fourth child is at home with her parents. The school was aware of the needs of all these children for treatment but unable to provide the kind of help needed within an academic setting.

Three partially blind teen-age boys were discharged because of character disorder. Two of these boys had I.Q.'s high in the average range and the other low in the average range. Two were educationally retarded mainly because they had not been required by their parents to attend school. One of these had an M.M.P.I. profile indicating sociopathic personality and had been involved in episodes of stealing at school. So far as is known none is now in school at home.

Five adolescent boys were too severely depressed to stay in school. Their I.Q.'s (Wechsler) were within the range of 92 to 113, but school work was below average. One boy, 15 years old, who had recently lost all remaining vision due to retinal detachment, had attended school intermittently since he was six years old but became discouraged very easily, giving up whenever work seemed difficult. His W.I.S.C. Verbal I.Q. was 110. The Haptic Intelligence Scale was administered although the norms do not go below the age of 16, and on these norms, this boy made a Performance I.Q. score of 130. A postulated full scale I.Q. therefore would be considerably higher than the Verbal score.

It was felt that this boy was amenable to psychotherapy but the family had not been able to get him into a clinic at the last report. The boy with the highest Verbal scale I.Q. had M.M.P.I. scores indicating psychopathic personality but exhibited symptoms of depression and anxiety with occasional outbursts of anger. He was about four grades retarded educationally. One boy had recently lost much of his vision due to surgery for osteopetrosis and was believed to be particularly amenable to help. He was in therapy while at school and withdrew from school for further treatment. School functioning was grossly affected in all these cases.

Five other children were discharged with the recommendation that they receive treatment for milder disturbance, - immaturity, excessive dependency, hostility, depression.

Retarded Children. Of the fifteen children whose retardation had no known cause, most had had prolonged trial placements in school. Various measures of mental functioning had been used as feasible. The two with the shortest trial periods had Maxfield-Buchholz social quotients of 23 and 25; neither child had communicative speech although there was echolalia and one of them frequently recited verbatim long statements she had heard during the day, such as television commercials. At the time of discharge, I.Q.'s on Hayes-Binet and both Wechsler Verbal tests ranged from 31 to 67 on the 13 testable children, the median being 51 and the mean 51.1. The 15 children had been in school an average of 3.66 years, a figure which would be higher if years in schools for the blind in other states were included.

The Children with Neurological Dysfunction Alone. The five children included in this category have some degree of retardation and

emotional disturbance but these are judged to be clearly associated with brain damage as the primary handicap. Three are children with familial progressive cerebro-macular degeneration and functioned as normal children until about the time they were admitted to the school. All deteriorated very markedly in their intellectual functioning and in their visual acuity during the period they were in school. Since this disease runs its course toward eventual idiocy and death at a more rapid pace the earlier its onset, one child was in school only six months, one four years and one five. These children will require prolonged custodial care, very difficult to arrange. The other two children were damaged either before birth or accidentally very early in life and present the typical picture of the brain-damaged child with aphasia. One boy was too old when admitted to this school for individual attention to benefit him academically. Proper training could have helped both greatly, since both test in the dull normal range yet were unable to make school progress with methods adapted only to blindness.

Brain-damaged Children Functioning at a Retarded Level. Two boys and two girls exhibited strong signs of neurological dysfunction in their school behavior and testing. All had medical examination on the school's recommendation and were found to be both brain-damaged and retarded. One child was in this school for only two years before being returned to public school where he was able to benefit from a program for educable retarded children since he had useful vision. The other three remained in this school for from four to seven years. In two cases it was believed that individual attention in an ungraded classroom was helping the child to make progress during part of the

enrollment period. The other child made no noteworthy gains but was in such poor physical condition that teachers continued to hope that there might be some social progress as her health improved. This did not prove to be the case. Only one of this group, therefore, is receiving any further training now that the School for the Blind has rejected them for readmission.

Brain-damaged Children who are Severely Disturbed. Five boys ranging in age, at the present time, from 11 to 21 years, have severe emotional disturbance as well as known neurological dysfunction. In two cases. blindness had its onset at the time when a brain tumor was discovered, for which surgery was performed. In one of these cases. Dr. Roeske felt the emotional problem to be an adjustment reaction amenable to psychotherapy and the neurological surgeon felt that some improvement could still be expected in the cerebral function. This young man had an M.M.P.I. score indicating psychosis and deterioration. He is presently in treatment and planning to return to public school after improvement. The other boy is hospitalized and his prognosis is very poor. In the other three cases, damage is believed to be congenital. Two have seizures under poor control and learning ability is undoubtedly affected by medication. Both have had psychotherapy. The third is in a state hospital. All of these boys have I.Q. scores in the dull normal or normal range. The mutual effect of the emotional factors and cerebral dysfunction can only be surmised.

Emotionally Disturbed Retarded Children. Six girls and three boys have been dismissed because of inability to progress educationally due to severe emotional problems with retardation. Their ages at this

time range from 10 to 19 years and all have been out of school for at least one year. It is not possible to judge to what degree the retarded mental functioning is due to emotional factors, so it was assumed that improvement would result if the disturbance could be alleviated. Parents were advised to seek treatment. However, it was the school's considered judgment that these children would still work on a retarded level if the emotional overlay could be removed, although it was expected that some academic improvement and social progress could be effected. One girl has had psychiatric treatment with a program of almost constant stimulation and interaction with others at home and in the community and has improved greatly in her adjustment. It seems likely that she will soon be able to return to school. For the others, the future looks bleak.

Commitment to state hospitals has been sought for three. The oldest, a boy whose test score was 80 on the W.A.I.S., is making a minimal adjustment in a sheltered workshop, where he is still deemed emotionally unstable and immature. Parents or grandparents are caring for the others in their homes and so far as is known treatment has been sought for none of them. Had it been sought, it is not likely that it could have been obtained within the financial means of the involved families.

Outlook for Children Not Admitted

At the present time there is no state facility geared to the needs of the children who cannot be admitted or re-admitted to Indiana School for the Blind. When parents are informed that their child is not admissable, some guidance is given for care and training at home. They

are invited to participate in the annual conference for parents of pre-school children at the school. They are referred to various sources of medical help whenever such referral might be of benefit. The Pediatric Out-Patient Clinic and the Pediatric Neurology Clinic at Indiana University Medical Center have been particularly helpful in guiding parents, on the recommendation of the school. Cooperation from these clinics has been outstanding. The school's consulting child psychiatrist, Dr. Nancy Roeske, is also director of Riley Child Guidance Clinic and hence known to many physicians and all psychiatrists throughout the state, so that her help is invaluable to parents of mentally handicapped children. Nonetheless, with best possible guidance and referral for medical attention, the problem facing these parents is still almost insurmountable.

Several programs for multi-handicapped children were reviewed in the literature. Those in state schools for the retarded and for the blind take a very limited number of children, mostly from the home state. Indiana similarly has a very few blind children in state hospitals and state schools for the retarded. For most of these children there is a program only adjusted to one of the handicaps; in some cases only custodial care is provided. The programs of a few private schools are far more adequate for the few children they are able to serve. Hope School in Springfield, Illinois, and St. Joseph's School for the Blind in Jersey City, New Jersey, were visited and their programs studied. Children served are similar to those rejected by Indiana School for the Blind, having all the various combinations of mental and emotional handicaps described. Hope School, although

planning expansion, presently serves 29 children. St. Joseph's has about 50. Neither school is able to admit more than a fraction of the number of children for whom application is made, so that service to Indiana children has been negligible in terms of numbers.

The programs of existing facilities serve as guidelines for initial plans for Indiana's work with mentally handicapped blind children. As pointed out in the review of the literature, curricula have been developed but there have been few opportunities for their use and any new program should be considered experimental. Flexibility and a willingness to start in a very small way are crucial attitudes. Communication between facilities is vitally important. Conferences are being planned at the present time for national and area exchange of experiences, the most promising a panel discussion at the American Orthopsychiatric Association convention in Washington, D. C. in March of 1968. However, so little has been attempted that the field must be considered new and all planning of curricula and facilities tentative.

Children In School Not Being Served Adequately (See Table III, page 83.)

So long as a child is able to make academic or social progress, he can be retained in Indiana School for the Blind, even though he has needs which are not being adequately met. The administration and staff of the school are deeply aware of areas of inadequacy in the program and are striving constantly, as they are enabled to do so, to meet the needs of the various types of children they serve. The line between members of the group previously described, the children not served by the school, and those in the school but deriving minimal benefit from the program, is sometimes a very fine line indeed. Great effort is put forth to keep

the multi-handicapped pupils progressing enough academically or socially to justify their remaining on the rolls, but each year a few of these pupils must be discharged from the school, some after relatively short trial periods of six months to a year, some after a few years of varying types of attempts to bring about development.

What is the nature of the problems which these children present? In order to understand what is needed it is first necessary to know the children, as individuals and as groups. Table III presents data on each child whose needs could not be met adequately at the time of the close of this study. If it were possible to categorize discretely, solution of the problems would lie in specific programs designed to meet specific needs, and only adequate funds and personnel would be required. Actually it will be necessary to attack the problem as though the children fell into discrete categories, but great flexibility will be required.

Of the 202 pupils in school, all of whom were studied, 103, or about 51%, were deemed handicapped emotionally or mentally to a degree that interfered significantly with academic progress or social adjustment. In order to determine the limits of the groups, all the children were observed in class and in social situations and intelligence tests were administered to all the children in the school. Much clinical information was obtained during the testing. Most of the children in the multi-handicapped group were interviewed and many of them were seen in counseling, at least intermittently on a need basis if not regularly. All of these children were referred to Dr. Roeske for evaluation and some were referred by her for neurological examination. Conferences were held with the involved school personnel on each child,

sometimes in groups, always individually as well. Some of the children's parents were interviewed.

There were three possible courses to be followed in the case of each child if the child seemed able to function satisfactorily in the normal academic and social program of the school, teachers and houseparents were counseled as needed but no intervention was required; if the child was unable to function at all with benefit from the school program, he was dismissed until he had received needed help; and if he was felt to be able to benefit from the program with help, adjustment was made to fit his needs as fully as was possible. It is this last group that constitutes our present concern.

The Present Adjusted Program

If a child is below the average range of intelligence or is functioning academically or socially below this range because of emotional disturbance, it is necessary to adjust teaching methods or time allotment for accomplishment of the tasks of learning and development. Some of these children need to repeat grades until they are working at a level quite inappropriate to their ages. In the primary years all children move at their own rate, with only five or six children per teacher, and "repetition" is an inaccurate term. Actually a child may spend two years in a grade without "repeating" any work. By fourth grade level there is usually a five years' age span in a grade room. Obviously many of the subnormal children are therefore carried along in the regular grade rooms with adjustments to their needs, difficult adjustments in some cases. There is frequent counseling with the teachers on each of these children, all personnel being

constantly alert for signs that the child may not be able to "make it" in this fairly normal situation.

When a child simply "does not fit" because of social maladjustment or too great disparity between his needs and those of others in any grade room, he is placed in a "Special Room", just as in any other school. The span of I.Q. levels in these rooms, one at Primary, one Intermediate and one High School level, is from 58 to 90 at this time. No attempt is made to separate the children according to the cause of impaired functioning, whether brain damage, retardation or emotional disturbance, but known or suspected causes are discussed with the teacher and appropriate methods of handling the child in various school situations are planned and revised as indicated. In these rooms, each child's program is individual and carefully structured, although flexible.

Intellectual Functioning of the Multi-handicapped Children

Of the 103 children with mental and emotional handicaps in addition to blindness, 53 (51%) were found to have I.Q.'s in the average range (90-109) or above, 31 (30%) were in the dull normal (80-89) or borderline defective range (70-79) and 19 (19%) were functioning at a defective level mentally.

Of the pupils in this group who were able to obtain I.Q.'s in the average range or above, all were emotionally disturbed, 27 (53%) moderately and 25 (47%) mildly but sufficiently so there was need for therapy; two (4%) were also known to have cerebral dysfunction. It is entirely possible that others in this group have some physiological cause for the emotional difficulty but it was not possible to ascertain subtle causes. All of these children were referred for psychiatric evaluation and two have had neurological examination.

Among the 31 children in the 79-89 I.Q. range, 7 (23%) are moderately disturbed, 13 (42%) mildly disturbed, 9 (29%) have cerebral dysfunction and 5 (16%) have retardation of unknown etiology without significant emotional problems.

Of the 19 pupils functioning at the defective level mentally, 4 (21%) have known cerebral dysfunction, 4 (21%) are moderately disturbed, 7 (39%) mildly disturbed and 7 (37%) are retarded without significant symptoms of neurological or emotional difficulty. Five (26%) are both disturbed and neurologically impaired.

Moderately Emotionally-Disturbed Children

Emotional factors affect test results as they also do classroom performance and social behavior. Among the 39 children (38%) deemed moderately disturbed there are none with cerebral dysfunction. Only 2 (4%) have defective level I.Q.'s. There are 7 (18%) in the borderline defective and dull normal I.Q. range (70-89). Twenty-eight (72%) have I.Q.'s in the average range and above.

Only two (7%) of these disturbed average and bright pupils do high quality school work, obtaining A & B grades, and one of these does only average work on standardized tests such as the Stanford Achievement Test and the Scholastic Aptitude Test of the College Entrance Examination Board. Although she plans to enter college, it is believed she must receive therapy to relieve her intense anxiety if she is to succeed. The other superior student has compulsive tendencies, is depressed and withdrawn; his parents have been advised to get him in psythotherapy as well. One other student does above average work and 8 (29%) average. Thirteen (46%) seriously disturbed students with

I.Q.'s average and above do poor quality work but still are passing and four (14%) are failing. It is believed urgent that all these students receive therapy. It is doubtful whether some of them can remain in school otherwise.

Mildly Disturbed Pupils.

The 45 (44%) less severely disturbed children present a similar picture. Twenty-five (56%) have above average I.Q.'s; one of these does high quality work, 4 above average, 6 average, 12 low and 2 failing. The one doing high quality work was psychotic two years ago and made marked improvement with rather radical changes in her environment, effected by her mother on the advice of Dr. Roeske and school personnel. All of these children are believed to need help at once if they are to be prevented from deteriorating further.

Children with Cerebral Dysfunction.

Of the 15 (15%) children known to be neurologically damaged, none are severely disturbed but 8 are mildly disturbed. One of these is a young man who has made remarkable progress under normal school conditions, with only speech therapy added to his program. Small classes have made it possible for teachers to be very patient with him and to give him extra time. He is aphasic and still has difficulty speaking. He is mildly disturbed, and has an above average I.Q. and does average work, his excellent grades in math and science compensating for poor work in the verbal areas. On the Scholastic Aptitude Test his math score was about as much above the mean as his verbal score was below. There is another student with an average I.Q. and mild emotional disturbance who is failing in his school work. Five dull normal and

borderline children are failing, as are three others who also show evidence of emotional difficulty. One student with a defective level I.Q. and mild disturbance is barely passing and two are failing. One who shows no obvious signs of emotional difficulty is also failing.

Improved Programs for These Children.

The school administration and personnel are keenly aware of the needs of all these deviant children. At the time of the study, the school had no social work department and this was believed to be the most pressing need. An attempt was being made to hire two psychiatric social workers in order to activate the department, with a view to adding to this staff when feasible. Work needs to be done in counseling the children with emotional difficulties, individually in many cases, and in small therapy groups. Most parents of handicapped children need help in handling their own emotional reaction to the condition of their children. Parents of all mentally or emotionally handicapped blind children require services of a social worker, not only to help them with their own emotional problems but to enable them to give their children the warmth and acceptance they need in order to develop optimally.

Educating emotionally withdrawn children in the same programs with brain-damaged children, as is presently being attempted as a matter of necessity, cannot be successful because the needs are diametrically opposed. Withdrawn disturbed children require constant purposeful stimulation, and when such children have some vision and are able to see color, lavish use is made of color and gross form stimulation in the environment, as well as the usual use of meaningful sound and tactile stimulation as is customary in the teaching of the normal

visually impaired child. Hyperactive children with neurological dysfunction, who are unable to be selective in response to stimuli, must have reduced environmental stimulation and highly structured lives in and out of the classroom. Teachers of such children require special training. Many doctors and educators now advocate special physical therapy programs such as that of Kephart to augment the special teaching methods. In a school where there are so many such children, the services of a physical therapist would be of untold value.

The school has one teacher of a special room who is certified in the teaching of the retarded and needs at least two more. Present teachers have backgrounds in Primary work, very appropriate to the needs of the children in their programs in a general way; both feel the need of training specific to the requirements of brain-damaged and of disturbed children. All three teachers are aware that normal Primary methods are not entirely satisfactory even for children with simple retardation. Curricula developed for these children are similar to those for trainable retarded in many aspects, with reduced emphasis on reading and writing skills. Training in mobility, in the skills of daily living and in social skills are emphasized, with academic work appropriate to the functioning level of the individual. Housekeeping and janitorial skills are developed, requiring proper space and equipment. In some schools subcontracting work is done, similar to that in rehabilitation centers. This type of program apparently suits the disturbed children equally as well as the retarded, since it provides for experience of success and development of good relationships with adults and other students. It must be flexible and individually planned, so that the

child moves to more complicated activities as he proves capable of handling them with some measure of success.

The numbers of children with mental and emotional handicaps in addition to blindness now being carried on the rolls of Indiana School for the Blind justify the staff's recently growing concern that their program for these children be expanded to meet their needs more adequately.

CHAPTER V

SUMMARY

In the state of Indiana there are a large number of blind children with mental impairment or emotional disturbance whose needs for education or training are not being met adequately by the present programs for handicapped children. Some of these children are receiving custodial care in state facilities for the retarded and in state hospitals, some in Indiana School for the Blind, and a very few in private facilities, but many are in the homes of their parents or foster parents, all of whom feel themselves ill-equipped to handle the charge placed upon them. Most of these people are seeking help. Most of them have asked the administration of the School for the Blind for help and advice and many have sought admission of their multi-handicapped children to the school.

There were 34 children known to the school at the end of 1966 whose parents had understood the severity of their children's mental impairment and never made application to the school. The school's visiting nurse calls in these homes, offering guidance and emotional support. Some of the parents attend the annual conference for parents of pre-school children at the school. Custodial care should be available for these children either on a full-time basis or part-time to provide relief for these harassed parents. A conference, at least annually, specific to their needs, should be held at the facility serving the children.

Rejected from the school without trial enrollment during the period of this study were 18 children whose needs are very nearly the

same as the first group and for whom the same recommendations must be made. The children, however, are able to benefit from a program of training in the skills of daily living and, to some extent, in social skills. A number of these children have been referred for neurological study and continuing service should be offered them, and other similar children, so that the parents and those training the children, may understand their needs and capabilities.

During the period of the study, 62 children who had been admitted to the school for trial periods of various lengths were withdrawn at the school's request. These children were categorized as having emotional disturbance, retardation or neurological dysfunction, singly or in combination. Two children exhibited all three additional handicaps. Twenty-two children were severely disturbed emotionally, almost half of them psychotic or borderline psychotic, and all in need of psychiatric treatment, preferably in a hospital program. It is conceivable that some of these children could eventually be readmitted to the School for the Blind, after treatment. There were 15 children too seriously retarded to benefit from an academic program, but amenable to training in a facility for trainable retarded children, possibly at the School for the Blind. Such a facility would have to be separated physically from the regular school although sharing overlapping special services. Five children with neurological dysfunction alone, four brain-damaged children functioning at a retarded level, five disturbed brain-damaged children and the two with all three problems, all require training programs developed especially for brain-damaged children, since the organic problem is primary. It is hoped that both retardation and disturbance

might be mitigated by alleviation of the problems presented by the brain damage. Nine emotionally disturbed retarded children might well receive treatment while taking part in the recommended program for the children with retardation without known cause, especially since it cannot be determined to what degree the disturbance and retardation are affecting each other. Therefore, recommendations for this group include custodial care for the most seriously affected and training programs for the brain-damaged and the retarded with many of the disturbed children fitting into each program, with treatment for their emotional difficulties, and some eventually returning to the School for the Blind if significant improvement is effected.

Children enrolled in the School for the Blind for whom the administration and staff feel it urgent to provide more adequate education have the same combinations of emotional disturbance, cerebral dysfunction and retardation in addition to visual impairment, but the degree of handicap is not too great for them to continue to progress minimally. In the population of 202 to 234 during the period of the study, it was found that 103 children had these additional problems: 39 moderately disturbed and 45 mildly disturbed; 15 with cerebral dysfunction; 19 with defective level I.Q.'s and 31 borderline defective and dull normal; 53 of average intelligence or above; 3 doing excellent school work, 6 above average, 15 average, 36 below average but passing and 43 failing, 49 with known home problems; only 6 receiving therapy in clinics or with psychiatrists; and 53 for whom therapy had been recommended by Dr. Roeske.

The most urgent need was seen to be the activation of a long proposed social work department at the school. Psychiatric social workers

are needed to provide individual and group therapy for the disturbed children and to work with the parents toward mitigating some of the problems in the homes which contribute to the children's conditions.

A modified program is needed for retarded children, with space for training in skills of daily living at home and school, in social skills and in academic subjects to the limit of each child's ability, and teachers skilled in the use of special curricula and methods. The school is only partially fulfilling this need in the present special rooms.

There is no program at the school for brain-damaged children, the urgent need being for training for teachers; facilities could easily be adapted.

In all, therefore, there are 217 children in Indiana who have had contact with Indiana School for the Blind between September 1963 and January 1, 1967, whose needs for care, training or education are not being met, or being met inadequately because of mental or emotional handicaps in addition to visual impairment. There are certainly many more than this number of children with the same needs but their existence is unknown to the school at this time.

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A P P E N D I X

TABLE I.

CHILDREN NOT ADMITTED

(A) Child
(B) Age at Testing
(C) Test
(D) Score
(E) Disturbed
(F) Slow Learner
(G) Functioning at Defective Level
(H) Neurologically Damaged
(I) Recommendations - Therapy
(J) Recommendations - Trainable Class
(K) Home Training
(L) Custodial Care

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
1	6-1	H-B	46			x			x		
2	18-6	WAIS	59			x				x	
3	10-11	M-B	22	x		x					x
4	10-7	H-B	17			x				x	
		M-B	26								
5	13-3	WISC	77	x	x			x			
6	5-4	H-B	47	x		x			x	x	
7	8-1	M-B	36			x	x		x	x	
8	16-1	WAIS	93	x				x			x
9	10-7	H-B	49			x	x				
	11-3	WISC	50			x	x				
10	13-3	H-B	48			x			x	x	
		WISC	51								
11	5-6	H-B	--			x	x		x		
		M-B	60								
12	10-4	H-B	60			x	x		x		x
13	6-4	H-B	--	x		x		x			
	7-7	H-B	--						x		
14	7-9	H-B	46	x		x					
	9-0	H-B	38					x			
15	11-2	WISC-Below	45	x		x			x	x	
16	5-2	M-B	48	x		x	x				
	6-5	M-B	48							x	
17	13-1	WISC	72		x				x	x	
18	5-4	M-B	63			x	x				
	6-7	H-B	43								
	6-7	M-B	64								
	N = 18			8	2	16	7				

TABLE II.

CHILDREN REJECTED FOR READMISSION

A. Child
B. Age at Testing
C. Test
D. I.Q. or S.Q.
E. Disturbed
F. Slow Learner
G. Functioning at Defective Level
H. Brain Damaged
I. Psychiatric Evaluations
J. Neurological Examination
K. Other Tests
L. Disposition

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
1	9-8	WISC-V	61	x		x	x	'64	'60'61'62'64		State Hospital
	10-1	H-B	61								
2	9-11	WISC-V	Untestable	x		x	x		'64		Home
	11-10	WISC-V	46								
3	9-4	WISC-V	58	x		x		'65+			State Hospital
	10-6	H-B	60								
4	10-2	WISC-V	75	x	x			'65+			Home
5	9-5	WISC-V	89	x				'65			
	11-4	WISC-V	Unscorable								Home
6	16-1	WAIS-V	96	x				'65'66+			Other School for Blind
7	14-4	H-B	83	x	x			'56'63'64			Home
	18-1	WAIS-V	87								
8	11-5	WISC-V	92	x				'64			Home
	12-2	WISC-V	85		x						
	13-8	WISC-V	81								
9	17-3	WAIS-V	89	x	x			'64+			Sheltered Shop
10	9-8	WISC-V	79	x	x			'66		AEFI	Home
	12-5	WISC-V	79								
11	16-3	WISC-V	66	x		x		'63			Private Psychotherapy
12	15-6	WISC-V	89	x	x			'64'65+			State Hospital
13	16-6	WAIS-V	108	x				'65			Home
14	12-5	WISC-V	94	x							
	15-5							'66		MMPI	Home
15	14-0	WISC-	111	x				'66			Home
16	13-11	WISC-V	92	x				'65			Home
17	14-4	WISC-V	110	x				'66	'66		Home

TABLE II.

(Continued)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
		HIS	130								
18	15-6	WISC-V	113	x				'65		MMPI	Foster Home
19	16-5	WAIS-V	103	x				'65			Clinic Private Therapy
											Public School
20	13-7	WISC-V	106	x				'65			Home
21	10-11	WISC-V	110								
	14-0			x				'66		AEFI	Other School for Blind
22	11-4	WISC-V	91	x				'65+			Clinic Therapy - Home
23	14-11	WISC-V	81	x	x			'64'65+			Clinic Therapy - Home
24	7-5	WISC-V	108	x							
	9-0	WISC-V	119					'64+			State Hospital
25	7-9	WISC-V	105	x				'65			Home - Public School
26	7-9	M-B	23 S.Q.			x		'64			Foster Home
27	10-11	H-B	31			x		'64			Home
28	6-8	M-B	25 S.Q.			x		'64			Home
29	14-0	WISC	45			x					Home
30	9-9	H-B	58			x		'65			Home
	11-9	WISC-V	51								
31	9-9	WISC-V	47			x		'65			Home
	11-9	WISC-V	48								
32	11-0	WISC-V	52			x		'64			Home
33	11-9	WISC-V	51			x		'66			Home
	11-9	H-B	43								
34	11-6	H-B	34			x		'64			Home
35	8-8	WISC-V	?			x					
	12-11	H-B	50			x					
	16-10	WAIS-V	62			x		'64			Home
36	11-7	WISC-V	76								
	15-1	WISC-V	67								
		H-B	58			x					Home
37	10-4	H-B	47			x		'65			Home
		WISC-V	56								
38	12-7	WISC-V	71			x					Home

TABLE II.

(Continued)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
	14-2	H-B	62								
39	11-2	H-B	50			x			'64		Home
		WISC-V	48								
40	15-11	WISC-V	62			x		'65			Home
41	15-10	WISC-V	85		x		x	'65			Home
42	11-4	WISC-V	81		x		x	'65	'65'66+		Public School
43	15-6	WISC-V	79		x		x		'64		Home
44	9-4	WISC-V	66			x	x	'65	'64+		Home
45	12-9	WISC-V	72								
	13-10	WISC-V	72								
	15-4	WISC-V	66			x	x	'65	'64+		Home
46	9-7	WISC-V	63			x	x	'64			Public School
47	10-3	H-B	Unscorable			x	x	'64	'61		Home
48	10-8	H-B	68			x	x				
	11-5	WISC-V	72								
	13-1	WISC-V	77					'64	'64+		Home
49	10-7	WISC-V	67			x	x	'65	'64'65+		Home
		H-B	61								
50	8-8	H-B	86	x	x		x	'64'66+	'64		Home
51	9-11	WISC-V	91	x			x	'63+	'62		State Hospital
	10-11	WISC-V	104								
52	17-7	WAIS-V	87	x	x		x	'65	'64'65+	MMPI	Clinic Therapy
53	10-6	WISC-V	81	x	x		x	'64+	'63+		Clinic Therapy
54	19-0	WAIS-V	106	x			x	'60-'64	'50+		State Hospital
55	10-1	H-B	30	x		x		'64			Home
56	16-5	WAIS-V	86	x	x						Home
57	11-10	WISC-V	56	x		x					Home
	12-5	WISC-V	62	x		x					
58	8-4	WISC-V	75	x		x		'65			Home
59	10-9	WISC-V	52	x		x					
	11-11	WISC-V	Unscorable					'64	'59		Home

TABLE II.

(Continued)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
60	12-6	WISC-V	63	x		x					
	15-9	WISC-V	52	x		x		'66		MMPI	Home
61	10-5	WISC-V	66	x		x		'64			Home
	11-5	WISC-V	70								
62	9-4	WISC-V	67	x		x		'61'64'65'66			Private Therapy
63	15-8	WISC-V	77	x		x					Sheltered Shop
	16-11	WAIS-V	90	x	x						

TABLE III.

CHILDREN IN SCHOOL NOT BEING SERVED ADEQUATELY

(A) Child
(B) Age
(C) Grade
(D) I. Q.
(E) Test
(F) Defective Level I.Q.
(G) Borderline or Dull Normal I.Q.
(H) Average or Above I.Q.
(I) Academic Functioning Level - High
(J) Academic Functioning Level - Above Average
(K) Academic Functioning Level - Average
(L) Academic Functioning Level - Low
(M) Academic Functioning Level - Failing
(N) Emotional Condition - Moderately Disturbed
(O) Emotional Condition - Mildly Disturbed
(P) Emotional Condition - Cerebral Dysfunction
(Q) Received Therapy
(R) Home Problems
(S) Therapy Advised

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
1	16-10	11	127	WAIS-V			x	x					x					x
2	8-5	1	70	H-B		x						x	x				x	x
3	17-1	10	108	WAIS-V			x				x		x				x	
4	15-0	8	91	WISC-V			x				x		x			x		
5	8-0	1	91	H-B			x				x		x				x	x
6	13-4	8	124	WISC-V			x			x			x			x	x	
7	10-0	3	97	WISC-V			x			x			x				x	x
8	12-6	5	94	WISC-V			x			x			x					x
9	14-2	7	104	WISC-V			x				x		x				x	x
10	12-9	5	100	WISC-V			x			x			x				x	x
11	18-5	11	125	WAIS-V			x		x				x				x	x
12	13-6	7	94	WISC-V			x				x		x				x	x
13	5-11	K	58	H-B	x						x		x				x	
14	15-5	8	108	WISC-V			x				x		x				x	x
15	9-3	3	105	WISC-V			x				x		x				x	x
16	15-9	10	101	WISC-V			x				x		x			x		
17	18-0	12	121	WISC-V			x	x					x					x
18	18-8	Spec.	81	WAIS-V		x						x	x				x	x
19	12-7	6	92	WISC-V			x					x	x			x		
20	10-11	4	95	WISC-V			x			x			x			x	x	

TABLE III

(Continued)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
21	17-7	Spec.	84	WISC-V		x					x	x	x					x
22	11-6	4	81	WISC-V		x					x	x	x					x
23	16-11	8	100	WAIS-V			x				x	x	x				x	
24	14-11	9	124	WISC-V			x				x		x				x	x
25	18-4	11	112	WAIS-V			x			x			x					x
26	5-3	K	144	H-B			x				x		x				x	x
27	15-4	9	130	WISC-V			x					x	x				x	x
28	10-7	3	101	WISC-V			x			x			x				x	
29	16-5	Spec.	62	WISC-V	x							x	x				x	x
30	16-1	9	113	WAIS-V			x				x		x					x
31	8-7	1	94	WISC-V			x				x		x				x	x
32	16-7		80	WISC-V		x					x		x				x	x
33	14-11	7	82	WISC-V		x						x	x				x	x
34	15-2	Spec.	90	WISC-V			x					x	x				x	
35	10-1	3	114	WISC-V			x			x			x					x
36	13-5	6	113	WISC-V			x				x		x				x	x
37	11-4	3	82	WISC-V		x					x		x				x	x
38	13-9		106	WISC-V			x				x			x				x
39	14-10		121	WISC-V			x				x			x			x	x
40	18-3	7	140	WISC-V			x		x					x			x	x
41	9-3	3	114	WISC-V			x				x			x				x
42	14-11	7	95	WISC-V			x				x			x			x	x
43	20-11	12	92	WAIS-V			x				x			x			x	x
44	14-10	8	92	WISC-V			x			x			x			x		
45	14-7		121	WISC-V			x		x				x				x	
46	14-4		86	WISC-V		x			x					x				x
47	12-11	5	95	WISC-V			x			x				x				x
48	15-8		89	WISC-V		x						x		x				x
49	5-6	K	68?	H-B	x					x				x			x	x

TABLE III

(Continued)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
50	15-4		100	WISC-V			x				x			x				x
51	12-9	5	106	WISC-V			x		x					x			x	x
52	15-8	9	128	WISC-V			x	x						x			x	x
53	15-10		90	WISC-V			x				x			x			x	
54	19-0	11	104	WAIS-V			x			x				x	x			
55	14-4		110	WISC-V			x				x			x				x
56	14-11	7	92	WISC-V			x			x				x				x
57	14-3		90	WISC-V			x				x			x			x	x
58	8-7	2	91	H-B			x		x					x			x	x
59	14-5	7	94	WISC-V			x					x		x				x
60	19-7	12	103	WAIS-V			x			x				x			x	x
61	11-5	5	87	WISC-V		x				x			x					x
62	7-11	2	145	WISC-V			x			x				x				x
63	14-5	8	97	WISC-V			x			x				x				x
64	9-2	2	94	WISC-V			x				x			x				x
65	6-6	1	131	WISC-V			x				x			x				x
66	9-7	Spec.	76	WISC-V		x					x			x			x	x
67	14-4	6	82	WISC_V		x						x		x				
68	9-6		84	WISC-V		x						x						
69	13-11	6	84	WISC-V		x					x							
70	13-11	6	82	WISC-V		x						x		x				
71	6-2	K	71	H-B		x					x			x			x	
72	10-9		87	WISC-V		x						x		x				
73	17-6		84	W-II-V		x						x						
74	19-3		85	H-B		x						x						
75	13-9	4	81	WISC-V		x					x							
76	8-2	2	81	H-B		x						x			x			
77	12-9	Spec.	71	WISC-V		x						x			x			
78	13-1	Spec.	80	WISC-V		x						x			x			
79	12-7	Spec.	86	WISC-V		x						x			x			
80	11-10	Spec.	76	WISC-V		x						x		x	x			

TABLE III

(Continued)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
81	15-5	Spec.	81	WISC-V		x						x		x	x			
82	13-3	Spec.	84	WISC-V		x						x			x			
83	16-4	Spec.	69	WISC-V	x							x			x			
84	12-6	3	63	WISC-V	x						x			x	x			
85	12-1	Spec.	79	WISC-V		x						x		x	x			
86	7-4	1	95	H-B			x					x		x	x			
87	10-9	Spec.	78	WISC-V		x						x			x			
88	8-1	1	63	H-B	x							x		x	x		x	
89	11-9	Spec.	58	WISC-V	x							x		x				
90	13-7	Spec.	62	WISC-V	x							x						
91	11-7	3	70	WISC-V	x						x			x			x	x
92	6-7	1	69	H-B	x							x		x	x			
93	16-6	Spec.	70	WISC-V		x						x						
94	13-2	Spec.	63	WISC-V	x							x		x			x	
95	13-2	Spec.	71	WISC-V		x						x		x			x	
96	6-7	1	60	H-B	x							x						
97	11-6	Spec.	65	WISC-V	x							x						
98	14-3	Spec.	60	WISC-V	x							x	x				x	
99	13-0	Spec.	61	WISC-V	x							x						
100	13-6	Spec.	62	WISC-V	x							x					x	
101	16-2	Spec.	60	WISC-V	x							x					x	
102	6-5	K	51	H-B	x						x						x	
103	8-4	Spec.	58	WISC-V	x							x	x				x	x
	N=103				19	31	53	3	6	15	36	43	39	45	15	6	49	53